TOP SECRET

Verification Questions for Possible Additional Strategic Missile Restrictions

1. One possible constraint would be to prohibit completely the flight testing of new strategic missiles. It might be anticipated that confidence firings of missiles already deployed, including pen-aids and MIRVs (unless these are banned), would be allowed, subject to agreement on total numbers per year. Agreement could be reached to allow space and satellite launchings. With what degree of confidence could we verify such constraints (a) by unilateral means alone, and (b) with supplementary procedures (such as pre-launch announcements, agreed impact areas, observation of launch sites, etc)?

2. Another possible constraint could be to limit throw weight of strategic missiles below an agreed upper bound. Total throw weight of land and sea-based forces combined could be limited; or there could be a total limit set on the sea-based and land-base forces each; or individual upper bounds could be placed on specific classes of missiles. With what confidence could we unilaterally verify various types of aggregate and system-imposed throw weight limits, taking account of such technological advances as propellant improvements? Could flight test restrictions assist? Would constraining the size of presently existing silos and sub launch tubes assist? With what accuracy could we verify launcher depth and diameter? For what range of throw weight limit in kilopounds would our confidence in verification be greatest?

3. In a possible missile reduction agreement, each side would destroy an agreed number of fixed, land-based launchers, hard as well as soft. With what confidence could we verify unilaterally that the Soviets had "destroyed" silos and launchers? Consider a variety of possible agreed means of accomplishing destruction, including massive use of high explosives, removal of silo cover, liner, and filling in with dirt, etc. To what extent could an observer near the site assist in our confidence?

4. In an agreement which limits the numbers of missile-firing submarines, there could be added a constraint on the size (as well as numbers) of missile launch tubes. The problem of verifying launch tube size is also related to [redacted] circumventing more stringent requirements for replacement of submarines with [redacted] generation ones--that is, we might prohibit enlargement of tube size. With what confidence could we unilaterally verify tube size? Would a provision limiting the Soviets to only certain of their facilities where submarines could be converted or refurbished help? Would modalities which limited the number of submarines which could be converted at one time assist? In addressing the foregoing questions, consider the possibility of new launch techniques for SLBMs.

5. An agreement might be obtained which allowed both sides to replace their present silos with [redacted] superhardened silos in different locations. Old silos would be destroyed in [redacted] batches, while construction of an

agreed number of replacements is begun. With what confidence could we unilaterally verify (a) the fact and extent of new superhard Soviet silos; (b) the size and hardness of the new sites?

6. As an add-on to basic agreed ABM limit, there could be allowed agreed levels of hard-point ABM defenses to protect existing and/or possibly newly deployed super hardened sites (see question 5). Consider the use of Galosh-type (exoatmospheric) interceptors, and, alternatively Sprint-type (terminal) interceptors for defense of Soviet hardened missile sites. Could we verify the location and capabilities of Soviet hard-point defense levels of 500, 1500, and 3000 interceptors assuming (a) SS-9 silo defense only; (b) SS-9 plus half the SS-11 silos defended; and (c) defenses of possible newly located super hardened sites? To what extent might we have difficulty distinguishing such Soviet hard-point defenses from Soviet "urban" ABM defenses? What if Soviet hard-point defenses were restricted to missile sites East of the Urals only?